FILED August 30, 2018 **Data Center** Missouri Public Service Commission

104 Exhibit No.:

Issue:

Infrastructure System Replacement Surcharge

Witness:

Sponsoring Party:

Ali Arabian MoPSC Staff Direct Testimony

Type of Exhibit: Case No.:

Date Testimony Prepared:

GO-2018-0310 August 22, 2018

MISSOURI PUBLIC SERVICE COMMISSION

COMMISSION STAFF DIVISION AUDITING

DIRECT TESTIMONY OF **ALI ARABIAN**

SPIRE MISSOURI, INC. (WEST)

CASE NO. GO-2018-0310

Jefferson City, Missouri August, 2018

File No. Gro-2018-03

DIRECT TESTIMONY 1 2 **OF** ALI ARABIAN 3 SPIRE MISSOURI, INC. - WEST 4 5 CASE NO. GO-2018-0310 Please state your name and business address. 6 Q. 7 Ali Arabian, P.O. Box 360, Suite 440, Jefferson City, MO 65102. A. 8 Q. By whom are you employed and in what capacity? 9 A. I am employed by the Missouri Public Service Commission ("Commission") 10 as a Utility Regulatory Auditor II. Please describe your educational background and work experience. 11 Q. I graduated from Lincoln University in Jefferson City, Missouri, with a 12 A. Bachelor of Science in Accounting, in May 2004. I graduated with a Masters of Business 13 Administration ("MBA") with an emphasis in Accounting from Lincoln University in 14 Jefferson City, MO in May 2007. I have previously worked in various jobs in the areas of 15 accounting and auditing. I began my employment with the Commission in September 2017. 16 17 Q. Have you previously filed testimony before this Commission? 18 A. Yes. I filed testimony in Case No. WR-2017-0285. What is the purpose of your testimony in this case? 19 Q. I am sponsoring Auditing Staff's recommendation for Spire West's 20 A. Infrastructure System Replacement Surcharge ("ISRS") application for Case No. 21 GO-2018-0310, which was attached as Appendix A to the Staff Recommendation filed on 22 August 6, 2018, and is attached as Schedule AA-d1 to this testimony. Staff witness 23

Caroline N. Newkirk will address the ISRS application for Spire East for Case No. GO-2018-0309 in her direct testimony filed in that proceeding.

- Q. Are you the same Ali Arabian who contributed to the Memorandum attached as Appendix A to the Staff Recommendation filed on August 6, 2018, in Case No. GO-2018-0310?
 - A. Yes.
- Q. Is the information contained in the Auditing Staff's Recommendation still true and accurate to the best of your knowledge?
 - A. Yes, with one update and two corrections.
 - Q. What is the update?
- A. In the Staff Recommendation, Staff stated, "Due to the increased workload, and Spire West's delay in providing Staff work order authorizations and updated workpapers for the update period, Staff was unable to conduct a review of sample invoices supporting the requested cost recovery for the update months of May and June 2018 prior to the filing of Staff's Recommendation. Staff will perform the review of a sample of invoices for May and June 2018 costs subsequent to the filing of its Recommendation, and will update its Recommendation if necessary." Since the Staff Recommendation has been filed, the sample of invoices for May and June 2018 costs have been reviewed. Staff found no issues during the review of those invoices.
- Q. What corrections to its calculation of the ISRS revenue recommendation did Staff make?
- A. In the Staff Recommendation filed on August 6th, Staff did not consistently adjust accumulated deferred income taxes to reflect Staff's proposed disallowance of the

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cost associated with removal of plastic mains and services lines. Staff has corrected that oversight. In addition, for purposes of this case only, Staff is no longer contesting Spire West's calculation of income taxes. Staff's corrected revenue requirement is attached as Schedule AA-d2.

- Q. Does this conclude your direct testimony in this proceeding?
- A. Yes, it does.

OF THE STATE OF MISSOURI

In the Matter of the Application of Spire Missouri Inc. to Establish an Infrastructure System Replacement Surcharge in its Spire Missouri West Service Territory)	Case No. GO-2018-0310		
	AF	FIDAVIT	OF AL	I ARABIAN	
STATE OF MISSOURI)	00			
COUNTY OF COLE)	SS.			

COMES NOW ALI ARABIAN and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing Direct Testimony; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

ALI ARABIAN

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this _______ day of August, 2018.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missourf
Commissioned for Cole County
My Commission Expires: December 12, 2020
Commission Number: 12412070

Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

In the Matter of the Application of Spire)	
Missouri Inc. to Change its Infrastructure)	Case No. GO-2018-0310
System Replacement Surcharge in its)	Tariff No. YG-2018-0164
Spire Missouri West Service Territory)	
)	

STAFF RECOMMENDATION

COMES NOW the Staff of the Missouri Public Service Commission and in response to the Commission's June 8, 2018, Order Directing Notice, Setting Intervention Deadline, and Directing Filing, submits its Staff Recommendation to the Commission as set forth in detail in the attached appendices, and in support thereof respectfully states as follows:

- 1. On June 7, 2018, Spire Missouri Inc. (formerly known as Laclede Gas Company) filed its *Verified Application and Petition of Spire Missouri Inc. to Establish an Infrastructure System Replacement Surcharge for Its Spire Missouri West* ("Spire West" or "Company"; formerly known as Missouri Gas Energy or MGE) *Service Territory* (the "Application") pursuant to Sections 393.1009, 393.1012 and 393.1015 of the Revised Statutes of Missouri and Commission Rule 4 CSR 240-3.265¹ which authorize gas corporations to recover certain eligible infrastructure replacement costs through an infrastructure system replacement surcharge ("ISRS").
- 2. In an *Order Suspending Tariffs* issued on June 8, 2018, the Commission suspended the tariff sheet filed by Spire West on June 7, 2018 (assigned tariff tracking number YG-2018-0164) until October 5, 2018. In its *Order Directing Notice, Setting*

¹ The Application also referenced Commission Rules 4 CSR 240-2.060 and 2.080.

Intervention Deadline, and Directing Filing referenced above, the Commission ordered Staff to file its recommendation regarding the Application no later than August 6, 2018. Staff's recommendation is attached hereto as Appendix A, Appendix B, and Appendix C, each of which are incorporated herein by reference.

- 3. In its current Application, Spire West filed to recover ISRS qualifying infrastructure replacement costs incurred during the period October 1, 2017, through June 30, 2018. The ISRS recovery requested for May and June 2018 plant in service additions was included on an estimated basis at the time the Application was filed, but documentation supporting actual ISRS plant addition costs for those months was supplied by Spire West during the course of Staff's audit and review in this case.
- 4. As part of Staff's examination of the Application, Auditing Staff reviewed supporting work papers, work order authorizations, and a sample of invoices supporting the work order authorizations, for the period of October 1, 2017, through April 30, 2018. Staff also determined the amount of plastic mains and services replaced in order to exclude the associated replacement costs from the ISRS request, consistent with the recent Western District Court of Appeals decision.
- 5. Due to the Western District Court of Appeals opinion in Case Nos. GO-2016-0332 and GO-2016-0333, Auditing Staff's workload has significantly increased in relation to both the initial months and the requested update months. Due to the increased workload, and Spire West's delay in providing Staff work order authorizations for the update period, Staff was unable to conduct a review of sample invoices supporting the requested cost recovery for the update months of May and June 2018 prior to the filing of Staff's Recommendation. Staff will perform the review of

a sample of invoices for May and June 2018 costs subsequent to the filing of its Recommendation, and will update its Recommendation if necessary.

- 6. Commission Rule 4 CSR 240-3.265(17) requires a reconciliation of the ISRS revenue Spire West collected from customers in the prior 12-month period to account for over or under-collection of previously approved ISRS revenue. Staff performed this reconciliation and found Spire West over-collected ISRS revenue by \$1,834,513 which is identical to the amount of over-collection calculated by Spire West. As a result of the reconciliation, Staff recommends including this amount of over-collected ISRS revenue as a reduction to the ISRS rate.
- 7. Based upon its review and all of its calculations, Staff is recommending that Spire West receive ISRS revenues for this case of \$4,801,895. However, this amount could change based on Staff's review of the sample invoices for the update months referenced above, or based on the Commission's decision in the remand proceedings for Case Nos. GO-2016-0332, GO-2016-0333, GO-2017-0201 and GO-2017-0202.
- 8. Staff has developed proposed ISRS rates for Spire West based on Staff's recommended ISRS revenue requirement for this case described above. Staff's proposed rates are consistent with the methodology used to establish Spire West's predecessor's past ISRS rates and are consistent with the overall methodology used to establish ISRS rates for other gas utilities. Staff's proposed ISRS rates are contained in Appendix B, attached hereto and incorporated by reference herein.
- 9. Staff would note that most ISRS rates utilize the most current annual report figures to establish the customer count used in the calculation of rates. These

ISRS rates are calculated based on the customer count used in the last Spire West rate case, Case No. GR-2017-0216. This change in method of calculation was necessary because of revisions that took place in the rate cases. This method of calculation is also authorized by statute.

10. Staff would also note that the Company is current on its FY 2018 assessment; however, at this time Staff cannot confirm whether it is current on its FY 2019 assessment.

WHEREFORE, Staff recommends the Commission issue an order in this case that:

- Rejects Spire West's ISRS tariff sheet (YG-2018-0164) P.S.C. MO No. 8
 Consolidated, First Revised Sheet No. 12 cancelling P.S.C. MO. No. 8 Consolidated,
 Original Sheet No. 12, as filed on June 7, 2018.
- 2. Approves Staff's recommended ISRS surcharge revenues in this docket in the incremental pre-tax revenue amount of \$4,801,895 re-establishing a "new" ISRS rate.
- 3. Authorizes Spire West to file an ISRS rate for each customer class as reflected in Appendix B, which generates \$4,801,895 annually.

Respectfully submitted,

/s/ Jeffrey A. Keevil

Jeffrey A. Keevil Missouri Bar No. 33825 Attorney for the Staff of the Missouri Public Service Commission P. O. Box 360 Jefferson City, MO 65102 (573) 526-4887 (Telephone) (573) 751-9285 (Fax)

Email: jeff.keevil@psc.mo.gov

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing have been mailed, hand-delivered, or transmitted by facsimile or electronic mail to counsel of record this 6th day of August, 2018.

/s/ Jeffrey A. Keevil

MEMORANDUM

TO:

Missouri Public Service Commission Official Case File

Case No. GO-2018-0310 - Tariff Tracking No. YG-2018-0164

Spire Missouri Inc.-West

FROM:

Ali Arabian, Regulatory Auditor, Auditing Department

Kimberly K. Bolin, Regulatory Auditor, Auditing Department Michael J. Ensrud, Rate & Tariff Examiner, Procurement Analysis

/s/ Mark L. Oligschlaeger 08/06/18

Auditing Department / Date

/s/ David M. Sommerer 08/06/18

/s/ Jeffrey A. Keevil 08/06/18

Commission Staff Division / Date

Staff Counsel's Office / Date

SUBJECT:

Staff Report and Recommendation Regarding the Verified Application and

Petition of Spire Missouri Inc. to Establish an Infrastructure System Replacement

Surcharge for its Spire Missouri West Service Territory

DATE:

August 6, 2018

BACKGROUND

On June 7, 2018, Spire Missouri Inc. ("Spire West" or "Company") filed the "Verified Application and Petition of Spire Missouri Inc. to Establish an Infrastructure System Replacement Surcharge for its Spire Missouri West Service Territory" with the Missouri Public Service Commission ("Commission"). The Application proposes to increase Spire West's Infrastructure System Replacement Surcharge (ISRS) rates and implement a revised Tariff Sheet with a proposed effective date of July 7, 2018.

Spire West made its filing pursuant to Sections 393.1009, 393.1012 and 393.1015 of the Revised Statutes of Missouri and Commission Rules 4 CSR 240-2.060, 2.080, and 3.265, which allow Missouri natural gas corporations to file a petition and proposed rate schedule with the Commission to recover certain infrastructure system replacement costs outside a formal rate case, through a surcharge on customers' bills.

Spire West requested ISRS recovery for plant from October 1, 2017 through April 30, 2018, with pro forma ISRS costs updated through June 30, 2018.

Spire West requested an increase in ISRS revenue requirement in the amount of \$7,085,762 in this ISRS filing.

OFFICIAL CASE FILE MEMORANDUM MO PSC Case No. GO-2018-0310, Tariff No. YG-2018-0164 August 6, 2018 Page 2 of 7

RELEVANT HISTORY

On April 30, 2018, Spire West filed "Spire Missouri Inc.'s Request for Waiver of Rule 4 CSR 4.017(1) For ISRS Case Filings, Or in The Alternative, Notice of Intended Case Filing".

On May 14, 2018, the Office of the Public Counsel filed a "Motion to Late File and Motion to reject Spire Missouri Inc.'s Request for Waiver of Rule 4 CSR 240.017(1) for ISRS Case Filings or Motion to Reject Sua Sponte".

On May 24, 2018, the Commission issued an "Order Granting Requests for Waiver".

On June 7, 2018, Spire West filed the "Verified Application and Petition of Spire Missouri Inc. to Establish an Infrastructure System Replacement Surcharge for its Spire Missouri West Service Territory".

On June 8, 2018, the Commission issued an "Order Directing Notice, Setting Intervention Deadline, and Directing Filing". The deadline for Staff's recommendation memo is August 6, 2018.

In a separate order – issued on the same day - the Commission issued an "Order Suspending Tariffs" until October 5, 2018.

On June 27, 2018, Spire West filed "Request for Approval of Customer Notices and Bills" and supplied copies of the new language of various notices and bills.

On July 10, 2018, the Commission issued its "Order Approving Customer Notice" that approved the customer notices and bills that was filed on June 27, 2018.

STAFF REVIEW AND REVENUE CALCULATIONS

On June 7, 2018, Spire Missouri, Inc. ("Spire" or "Company") filed its Verified Application and Petition in Case No. GO-2018-0310 to establish an Infrastructure System Replacement Surcharge (ISRS) for its Spire West service territory (formerly known as Missouri Gas Energy). This is the first ISRS filing since Spire West's most recent general rate case, Case No. GR-2017-0216.

Section 393.1015.3, RSMo, states, "A gas corporation may effectuate a change in its rate pursuant to the provisions of this section no more often than two times every twelve months." The Spire West tariffs filed with this Application have been suspended until October 5, 2018. In Case No. GO-2016-0332, which was filed in September of 2016, the effective date for Spire West's revised ISRS rates was January 28, 2017. Since that date, Spire West has changed its

OFFICIAL CASE FILE MEMORANDUM MO PSC Case No. GO-2018-0310, Tariff No. YG-2018-0164 August 6, 2018 Page 3 of 7

ISRS surcharge one additional time, in Case No. GO-2017-0201, with the effective date of June 1, 2017. Based upon Spire West's previous ISRS filings and the statute, Staff asserts that since this ISRS filing will be going into effective later than January 28, 2018, that the Company is in compliance with the statute.

Commission Rule 4 CSR 240-3.265(18), Natural Gas Utility Petitions for Infrastructure System Replacement Surcharges, states:

The Commission shall reject an ISRS petition after a commission order in a general rate proceeding unless the ISRS revenues required in the petition, on an annualized basis, will produce ISRS revenues of at least the lesser of one-half of one percent (1/2%) of the natural gas utility's base revenue level approved by the commission in the natural gas utility's most recent general rate case proceeding or one (1) million dollars, but not in the excess of ten percent (10%) of the subject utility's base revenue level approved by the commission in the utility's most recent general rate proceeding.

Spire West's requested ISRS revenues exceed one-half of one percent of the natural gas utility's base revenue level approved by the commission in the most recent Spire West rate case, and Spire West's cumulative ISRS revenues, including this filing, do not exceed ten percent of the base revenue levels approved by the commission in the last Spire West rate case.

In this Application, Spire West filed to recover ISRS qualifying replacement costs incurred during the period October 1, 2017, through June 30, 2018. The ISRS recovery requested for May and June 2018 plant in service additions was included on an estimated basis at the time Spire's Application was filed, but documentation supporting actual ISRS plant addition costs for these months was supplied by Spire West during the course of Staff's audit.

As part of its examination of Spire West's application, Auditing Staff reviewed supporting workpapers, work order authorizations and a sample of invoices supporting the work order authorizations for the period of October 1, 2017, through April 30, 2018. Staff also communicated with Spire personnel to clarify Spire application when necessary. Staff also determined the amount of plastic mains and services replaced for these months in order to exclude the associated replacement costs from the ISRS request consistent with the recent Western District Court of Appeals decision. For this purpose, Staff used the same methodology it recently applied in the remand proceedings for Case Nos. GO-2016-0332, GO-2016-0333, GO-2017-0201 and GO-2017-0202.

OFFICIAL CASE FILE MEMORANDUM MO PSC Case No. GO-2018-0310, Tariff No. YG-2018-0164 August 6, 2018 Page 4 of 7

In the past, Staff has included ISRS eligible costs for the requested update period in its review of the Company's ISRS request. However, due to the Western District Court of Appeals opinion in Cases Nos. GO-2016-0332 and GO-2016-0333 Staff's workload has significantly increased in relation to both the initial months and the requested update months. Due to the increased workload in this case, and Spire West's delay in providing Staff work order authorizations and workpapers for the update period, Staff was unable to conduct a review of sample invoices supporting the requested cost for recovery for the update months of May and June 2018, prior to the filing of Staff's Recommendation. Staff will perform the review of a sample of invoices for May and June 2018 costs subsequent to the filing of its Recommendation, and will update its Recommendation if necessary.

The following documentation was provided to Staff on the following dates:

- June 8, 2018 -Work order authorizations over \$50,000 for the months of October 2017 through April 2018.
- June 19, 2018 Work order authorizations between \$25,000 and \$50,000 for October 2017 through April 2018
- June 19, 2018 Work order Charge Details for October 2017 through April 2018
- July 3, 2018 A sample of invoices for October 2017 through April 2018
- July 18, 2018 Work order authorizations over \$50,000 for May and June 2018
- July 26, 2018 Work order authorizations between \$25,000 and \$50,000 for May and June 2018
- July 31, 2018 Work order Charge Details for May and June 2018

In this case, Spire West did not provide supporting information concerning the ISRS costs for the update period months of May and June 2018 until late in the audit process, as noted above. In the future, Staff requests that such information be provided to it as soon as possible after the costs are reasonably finalized to allow for continued use of the ISRS update period process for Spire West.

Commission Rule 4 CSR 240-3.265 Natural Gas Utility Petitions for Infrastructure System Replacement Surcharges sets forth the definitions of natural gas utility plant projects that are eligible for ISRS treatment. Staff concluded each of the projects reviewed meets the ISRS rule qualifications, with the exception of plastic mains and services referenced above.

The methodology used by the Auditing Staff allows for consideration of all accumulated depreciation and deferred income taxes on ISRS qualifying infrastructure replacement costs

OFFICIAL CASE FILE MEMORANDUM MO PSC Case No. GO-2018-0310, Tariff No. YG-2018-0164 August 6, 2018 Page 5 of 7

through September 30, 2018. This methodology is consistent with past reviews conducted by Auditing Staff and with Staff's view that the calculation of the ISRS revenue requirement should closely reflect the revenue requirement for ISRS qualifying plant as of the effective date of the ISRS rates.

In Spire East ISRS cases going back many years, both the Company and Staff have chosen to incorporate half of the value of certain income tax deductions in ISRS revenue requirement. This 50/50 split for Spire East was agreed to because there had been a previous dispute over the applicability of these particular deductions to ISRS plant additions. For Spire West in this case, Staff has reflected the same 50/50 split of the revenue requirement impact of these tax deductions for Spire West as it previously had for Spire East.

STAFF RECONCILIATION

Commission Rule 4 CSR 240-3.265(17) requires a reconciliation of the ISRS revenue Spire West collected from customers in the prior 12-month period to account for over or under-collection of previously approved ISRS revenue. Staff performed this reconciliation and found Spire West over-collected ISRS revenue by \$ 1,834,513 which is identical to the amount of over-collection calculated by Spire West. As a result of the reconciliation, Staff recommends including this amount of over-collected ISRS revenue in Spire West's ISRS rates as a reduction to the ISRS rate.

SUMMARY AND CONCLUSIONS

Based upon its review and calculations made in response to this ISRS Application, Staff recommends Spire West receive ISRS revenues of \$4,801,895 (see attached Appendix C to this memo). Staff would note that this amount could change based on Staff's review of the sample invoices for the update months referenced above, or based on the Commission's decision in the remand proceedings for Case Nos. GO-2016-0332, GO-2016-0333, GO-2017-0201 and GO-2017-0202.

Based upon its review and all of its calculations, Staff is recommending that Spire West receive ISRS revenues of \$4,801,895.¹ This is different than Spire West's requested ISRS-related revenue requirement of \$7,085,762 as sought. The difference is attributed to all the aforementioned revisions and corrections addressed above.

¹ This amount could change based on Staff's review of the sample invoices for the update months referenced above, or based on the Commission's decision in the remand proceedings for Case Nos. GO-2016-0332, GO-2016-0333, GO-2017-0201 and GO-2017-0202.

OFFICIAL CASE FILE MEMORANDUM MO PSC Case No. GO-2018-0310, Tariff No. YG-2018-0164 August 6, 2018 Page 6 of 7

The ISRS rates that Staff is proposing will re-establish a new ISRS revenue requirement in the amount of \$4,801,895² after the ISRS was reduced to zero as part of GR-2017-0216. This is a reduction of \$2,283,867 from the requested \$7,085,762 ISRS reimbursement.

THE ISRS RATE SCHEDULES

Staff's recommended rates are consistent with the methodology used to establish MGE's (Spire West's predecessor entity) past ISRS rates and consistent with the overall methodology used to establish ISRS rates for other gas utilities. Staff's recommended ISRS rates are contained in Appendix B, attached hereto and incorporated by reference.

Most ISRS filings utilize the most-current annual report figures to establish the customer-count used in the calculation of rates. These ISRS rates are calculated based on the customer-count used in the last rate case, Case No. GR-2017-0216. The relevant statute clearly allows for this substitution when it states the following.

393.1015. Documentation to be submitted — notice to be published — examination of proposal — authorization by commission, when — pretax revenues, factors to be considered — revised rate schedule, filed when — rulemaking authority. —

5. (1) The monthly ISRS charge may be calculated based on a reasonable estimate of billing units in the period in which the charge will be in effect, which shall be conclusively established by dividing the appropriate pretax revenues by the customer numbers reported by the gas corporation in the annual report it most recently filed with the commission pursuant to subdivision (6) of section 393.140, and then further dividing this quotient by twelve. Provided, however, that the monthly ISRS may vary according to customer class and may be calculated based on customer numbers as determined during the most recent general rate proceeding of the gas corporation so long as the monthly ISRS for each customer class maintains a proportional relationship equivalent to the proportional relationship of the monthly customer charge for each customer class. (Emphasis Added)

This change in method of calculation was necessary because of revisions that took place in the rate cases.

² See footnote above.

OFFICIAL CASE FILE MEMORANDUM MO PSC Case No. GO-2018-0310, Tariff No. YG-2018-0164 August 6, 2018 Page 7 of 7

Spire is current on its FY 2018 assessment. At this time, Staff cannot confirm whether it is current on its FY 2019 assessment. The PSC Annual Report is up to date. Staff is not aware of any other matter before the Commission that affects or is affected by this filing except as noted above.

RECOMMENDATION

Based upon the rationale stated above, Staff recommends the Commission issue an order in this case that:

- 1. Rejects Spire West's ISRS tariff sheet (YG-2018-0164) P.S.C. MO No. 8 Consolidated, First Revised Sheet No. 12 cancelling P.S.C. MO. No. 8 Consolidated, Original Sheet No. 12, as filed on June 7, 2018.
- 2. Approves the Staff's recommended ISRS surcharge revenues in this docket in the incremental pre-tax revenue amount of \$4,801,895 re-establishing a "new" ISRS rate.
- 3. Authorizes Spire West to file an ISRS rate for each customer class as reflected in Appendix B, which generates \$4,801,895 annually.

SPIRE MISSOURI INC. -WEST CASE NO. GO-2018-0310 & YG-2018-0164

Staff's Total ISRS Rev Req

\$4,801,895

Customer Rate Class	Cust#	Customer Charge	<u>Ratio To</u> <u>Residential</u>	Weighted Cust #	Customer Percentage	<u>Cal</u> <u>ISRS</u> <u>Charge</u>	<u>ISRS</u> Revenues
Residential	469,947	\$20.00	1.0000	469,947	82.9794%	\$0.71	\$3,984,585
SGS (Small Gen. Service)	31,727	\$30.00	1.5000	47,591	8.4031%	\$1.06	\$403,510
LGS-Large Gen. Service	3,628	\$130.17	6.5085	23,613	4.1694%	\$4.60	\$200,208
LV-Large Volume Service	460	\$1,095.27	54.7635	25,191	4.4481%	\$38.69	\$213,591
TOTAL	505,762			566,342	100.00%	- -	\$4,801,895

^{*} Due to rounding to the nearest penny, the designed ISRS rates will over-collect by \$1621. However, it should be noted that the total amount collected will be trued up at a later date.

Spire Missouri West ISRS Revenue Requirement Calculation

ISRS Activity:

Gas Utility Plant Projects - Main Replacements and Other Projects Extending Useful Life Work Orders Placed in Service	e of Mains:
Gross Additions	58,416,188
Deferred Taxes	(448,456)
Accumulated Depreciation	(491,202)
	(431,202)
Total Net	57,476,530
Gas Utility Plant Projects - Service Line Replacements and Insertion Projects:	
Work Orders Placed in Service	. =
Gross Additions	1,739,396
Deferred Taxes	(120,732)
Accumulated Depreciation	(24,589)
Total Net	1,594,075
Gas Utility Plant Projects - Regulator Stations:	
Work Orders Placed in Service	
Gross Additions	-
Deferred Taxes	-
Accumulated Depreciation	-
Total Net	
Can Hilliby Blant Brainete. Main Balanstians not of Baimburgamenta.	
Gas Utility Plant Projects - Main Relocations net of Reimbursements: Work Orders Placed in Service	
Gross Additions	C 90E 400
Deferred Taxes	6,865,186
	(48,407)
Accumulated Depreciation	(56,499)
Total Net	6,760,280
Increase in Accumulated Deferred Income Taxes and Accumulated Depreciation Associated with Eligible Infrastructure System Replacements which are included in a Currently Effective ISRS Total Incremental Accumulated Depreciation Total Incremental Accumulated Deferred Taxes	- -
Total ISRS Rate Base	65,830,885
Overall Rate of Return per GR-2017-0216	7.20%
UOI Required	4,738,310
Income Tax Conversion Factor	1.34135
Revenue Requirement Before Interest Deductibility	6,355,732
Total ISRS Rate Base	65,830,885
Weighted Cost of Debt per GR-2017-0216	1.8900%
Interest Deduction	1,244,204
Marginal Income Tax Rate	25.4482%
Income Tax Reduction due to Interest	316,628
Income Tax Conversion Factor	1.34135
Revenue Requirement Impact of Interest Deductibility	424,709
Total Revenue Requirement on Capital	5,931,023
Depreciation Expense	1,086,754
Net Property Taxes	214,988
SRS Revenue Overcollection January 2014 through May 2018	(1,834,513)
Total ISRS Revenues per Company	(1,001,010)
	5,398,252
Total ISRS Revenues per Staff	
Fotal ISRS Revenues per Staff Average of Company and Staff Recommendations	5,398,252

Schedule AA-d1
Page 14 of 17
Appendix C

OF THE STATE OF MISSOURI

In the Matter of the Application of Spire Missouri Inc. to Establish an Infrastructure System Replacement Surcharge in its Spire Missouri West Service Territory)	File No. GO-2018-0310	
	AF	FIDAVIT	OF AL	I ARABIAN	
STATE OF MISSOURI)				
COUNTY OF COLE)	SS.			

COMES NOW ALI ARABIAN and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing Staff Recommendation in Memorandum form; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

ALI ARABIAN

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this ______ day of August, 2018.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
'ammissioned for Cole County
My Commission Expires: December 12, 2020
Commission Number: 12412070

Notary Public

OF THE STATE OF MISSOURI

In the Matter of the Application of Spire) Missouri Inc. to Establish an Infrastructure) System Replacement Surcharge in its Spire) Missouri West Service Territory)
AFFIDAVIT OF KIMBERLY K. BOLIN
STATE OF MISSOURI)
COUNTY OF COLE) ss.
COMES NOW KIMBERLY K. BOLIN and on her oath declares that she is of sound mind
and lawful age; that she contributed to the foregoing Staff Recommendation in Memorandum
form; and that the same is true and correct according to her best knowledge and belief.
Further the Affiant sayeth not. Kimbuly K. Bolin KIMBERLY K. BOLIN
JURAT
Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this day of
August, 2018.
D. SUZIE MANKIN Notary Public - Notary Seal State of Missouri Commissioned for Cole County My Commission Exceptible 12, 2020 My Commission Exceptible 12, 2020 To commission Fig. 2020 Notary Public

OF THE STATE OF MISSOURI

In the Matter of the Application of Spire Missouri Inc. to Establish an Infrastructure System Replacement Surcharge in its Spire Missouri West Service Territory) File No. GO-2018-0310)
AFFIDAVIT OF M	MICHAEL J. ENSRUD
STATE OF MISSOURI)	
COUNTY OF COLE) ss.	
COMES NOW MICHAEL J. ENSRUD	and on his oath declares that he is of sound mind
and lawful age; that he contributed to the fo	oregoing Staff Recommendation in Memorandum
form; and that the same is true and correct according	ording to his best knowledge and belief.
Further the Affiant sayeth not.	Michael L. Ensued UCHAEL J. ENSRUD
Jt	JRAT
Subscribed and sworn before me, a duly co	onstituted and authorized Notary Public, in and for
the County of Cole, State of Missouri, at my o	ffice in Jefferson City, on this day of
August, 2018.	
D. SUZIE MANKIN Notary Public - Notary Seal State of Missourl Commissioned for Cole County My Commission Expires: December 12, 2020 Commission Number: 12412070	Asuzullankin Novary Public

Spire Missouri West ISRS Revenue Requirement Calculation

ISRS Activity:

Gas Utility Plant Projects - Main Replacements and Other Projects Extending Useful Life Work Orders Placed in Service	of Mains:
Gross Additions	58,416,188
Deferred Taxes	(409,241)
Accumulated Depreciation	(491,202)
Total Net	57,515,745
On Hillity Plant Business Coming Live Danks awards and Installed Business.	
Gas Utility Plant Projects - Service Line Replacements and Insertion Projects: Work Orders Placed in Service	
Gross Additions	1,739,396
Deferred Taxes	(9,650)
Accumulated Depreciation	(24,589)
Total Net	1,705,157
One 1888 Plant Projects - Paraleten Stationer	
Gas Utility Plant Projects - Regulator Stations: Work Orders Placed in Service	
Gross Additions	_
Deferred Taxes	_
Accumulated Depreciation	
Total Net	<u> </u>
Gas Utility Plant Projects - Main Relocations net of Reimbursements:	
Work Orders Placed in Service Gross Additions	6,865,186
Deferred Taxes	(48,407)
Accumulated Depreciation	(56,499)
Total Net	6,760,280
Increase in Accumulated Deferred Income Taxes and Accumulated Depreciation Associated with Eligible Infrastructure System Replacements which are included in a Currently Effective ISRS Total Incremental Accumulated Depreciation Total Incremental Accumulated Deferred Taxes	<u>-</u>
Total more mental production beloned Taxoo	
Total ISRS Rate Base	65,981,182
Overall Rate of Return per GR-2017-0216	7.20%
UOI Required	4,749,128
Income Tax Conversion Factor	1.34135
Revenue Requirement Before Interest Deductibility	6,370,243
Total ISRS Rate Base	65,981,182
Weighted Cost of Debt per GR-2017-0216	1.8900%
Interest Deduction	1,247,044
Marginal Income Tax Rate	25.4482%
Income Tax Reduction due to Interest	317,351
Income Tax Conversion Factor	1.34135
Revenue Requirement Impact of Interest Deductibility	425,678
Total Revenue Requirement on Capital	5,944,565
Depreciation Expense	1,086,754
Net Property Taxes	214,988
ISRS Revenue Overcollection January 2014 through May 2018	(1,834,513)
Total ISRS Revenues per Company	5,411,794